

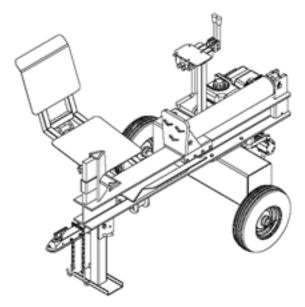
# 20 TON LOG SPLITTER Model 56072

## SET UP, OPERATING, AND SERVICING INSTRUCTIONS

#### WARNING! IMPORTANT INFORMATION

The Hitch Coupler MUST be properly secured to the hitch ball of the towing vehicle. After assembly and attachment, pull up and down on the Hitch Coupler to make sure the hitch ball is fitting snugly in the Hitch Coupler. **There must be no play between the hitch ball and Hitch Coupler.** If there is play, tighten the Adjustment Nut until no play is present. If the Adjustment Nut is too tight, the Handle will not lock. **Carefully read and follow the complete instructions in this manual BEFORE setup or use.** 

If the Coupler is not secured properly, the ball could come loose while the Log Splitter is in motion, possibly causing property damage, SERIOUS PERSONAL INJURY, or DEATH.



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## Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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For technical questions or replacement parts, please call 1-800-444-3353.

## CONTENTS

IMPORTANT SAFETY	
	3
BASIC SPECIFICATIONS	7
UNPACKING	7
SET UP INSTRUCTIONS ASSEMBLY PACKING THE BEARINGS /	
HUB AND WHEEL ASSEMBL LOG SPLITTER ASSEMBLY	
FILLING THE HYDRAULIC FLUID	10
OPERATING INSTRUCTIONS START PROCEDURE EQUIPMENT OPERATION TRANSPORTING THE LOG SPLITTER:	11 11
SERVICING	. 14
MAINTENANCE PROCEDURES BLEEDING THE HYDRAULIC SYSTEM:	
BLEEDING THE HYDRAULIC SYSTEM: CHANGING THE HYDRAULIC FLUID	14
BLEEDING THE HYDRAULIC SYSTEM: CHANGING THE HYDRAULIC FLUID ENGINE MAINTENANCE AND SERVICE	14 15 15
BLEEDING THE HYDRAULIC SYSTEM: CHANGING THE HYDRAULIC FLUID ENGINE MAINTENANCE AND	14 15 15 15
BLEEDING THE HYDRAULIC SYSTEM: CHANGING THE HYDRAULIC FLUID ENGINE MAINTENANCE AND SERVICE EQUIPMENT LUBRICATION	14 15 15 15 15
BLEEDING THE HYDRAULIC SYSTEM: CHANGING THE HYDRAULIC FLUID ENGINE MAINTENANCE AND SERVICE EQUIPMENT LUBRICATION STORAGE	14 15 15 15 . 15 . 16 . 17
BLEEDING THE HYDRAULIC SYSTEM: CHANGING THE HYDRAULIC FLUID ENGINE MAINTENANCE AND SERVICE EQUIPMENT LUBRICATION STORAGE PARTS LIST ASSEMBLY DIAGRAM HYDRAULIC RAM SEALS PARTS	14 15 15 15 . 16 . 17 18

## SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

## **IMPORTANT SAFETY** INFORMATION

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

## 

**DANGER** indicates

a hazardous situation which, if not avoided, will result in death or serious injury.

## 

WARNING indicates a

hazardous situation which, if not avoided, could result in death or serious injury.

## 

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## NOTICE

NOTICE is used to address practices not related to personal injury.

**CAUTION**, without

## CAUTION

the safety alert symbol, is used to address practices not related to personal injury.



WARNING! Read all instructions. Failure to follow all instructions listed below may result in fire, serious injury and/or DEATH. The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

#### SAVE THESE INSTRUCTIONS

## **SET UP PRECAUTIONS**

- Gasoline fuel and fumes are flamma-1. ble, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials nearby.
- 2. Have multiple ABC class fire extinguishers nearby.
- 3. Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.
- 4. Set up and use only on a flat, level, well-ventilated surface.

- 5. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during set up.
- 6. Use only lubricants and fuel recommended in the engine manual or in the Specifications chart of this manual.

### **ENGINE PRECAUTIONS**

Follow engine precautions and instructions in the included engine instruction manual.

### **OPERATING PRECAUTIONS**



1.

CARBON MONOXIDE HAZARD Using an engine indoors CAN KILL YOU IN MINUTES.

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

 Keep children away from the equipment, especially while it is operating.

- Do not leave the equipment unattended when it is running. Turn off the equipment (and remove safety keys, if available) before leaving the work area.
- 4. Rope off work area around the Log Splitter to keep children and spectators away during operation.
- Never allow children to climb on or play near Log Splitter even when not in use.
- People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to a heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.
- Use only accessories that are recommended by Harbor Freight Tools for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.
- Operate the Log Splitter, with the wheels blocked, on a dry, level surface capable of supporting the combined weight of the Log Splitter and logs.
- Do not tow the Log Splitter on roads or highways. This product is not D.O.T. compliant, and is not road legal.
- Always make sure the hitch coupler is securely fixed to the vehicle before moving it. If the Coupler is not secured properly, the link could come loose while the trailer is in motion, possibly causing property damage,

SERIOUS PERSONAL INJURY, or DEATH.

- Never place hands or feet between the log and splitter wedge, or between the log and the ram during the forward or reverse stroke.
- 12. Never place your hands or body near a hydraulic fluid leak. High-pressure fluid can be forced under the skin resulting in serious injury.
- 13. Never split a log that contains any foreign materials (nails, for example).
- 14. Do not use on logs longer than 25" or with a diameter greater than 12".
- Wear ANSI-approved safety goggles, NIOSH-approved dust mask/respirator under a full face shield, heavy-duty work gloves, steel-toe work boots and hearing protection during use.
- Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Gasoline-powered engines may ignite the dust or fumes.
- Do not expose the Log Splitter to rain or wet conditions. Water entering the Log Splitter will increase the risk of electric shock.
- Stay alert, watch what you are doing and use common sense when operating this piece of equipment. Do not use this piece of equipment while tired or under the influence of drugs, alcohol or medication.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.

- 20. Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- 21. Parts, especially exhaust system components, get very hot during use. Stay clear of hot parts.
- 22. Do not cover the engine or equipment during operation.
- 23. Keep the equipment, engine, and surrounding area clean at all times.
- 24. Use the equipment, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of equipment, taking into account the working conditions and the work to be performed. Use of the equipment for operations different from those intended could result in a hazardous situation.
- 25. Do not operate the equipment with known leaks in the engine's fuel system.
- 26. This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)
- When spills of fuel or oil occur, they must be cleaned up immediately. Dispose of fluids and cleaning materials as per any local, state, or federal codes and regulations. Store oil rags in a bottom-ventilated, covered, metal container.
- Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.

- Before use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the equipment's operation.
   If damaged, have the equipment serviced before using. Many accidents are caused by poorly maintained equipment.
- 30. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.

## SERVICE PRECAUTIONS

- 1. Before service, maintenance, or cleaning:
  - a. Turn the engine switch to its "OFF" position.
  - b. Allow the engine to completely cool.
  - c. Then, remove the spark plug wire(s) from the spark plug(s).
- Keep all safety guards in place and in proper working order. Safety guards include muffler, air cleaner, mechanical guards, and heat shields, among other guards.
- 3. Do not alter or adjust any part of the equipment or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician may adjust parts that may increase or decrease governed engine speed.
- 4. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during service.
- 5. Maintain labels and nameplates on the equipment. These carry impor-

tant information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

- 6. Have the equipment serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the equipment is maintained. Do not attempt any service or maintenance procedures not explained in this manual or any procedures that you are uncertain about your ability to perform safely or correctly.
- 7. Store equipment out of the reach of children.
- 8. Follow scheduled engine and equipment maintenance.
- 9. Refueling:
  - a. Do not smoke, or allow sparks, flames, or other sources of ignition around the equipment, especially when refuelling.
  - b. Do not refill the fuel tank while the engine is running or hot.
  - c. Do not fill fuel tank to the top. Leave a little room for the fuel to expand as needed.
  - d. Refuel in a well-ventilated area only.
  - e. Wipe up any spilled fuel and allow excess to evaporate before starting engine. To prevent FIRE, do not start the engine while the smell of fuel hangs in the air.



## **BASIC SPECIFICATIONS**

Hydraulic Jack Force	20 Tons
Hydraulic Fluid Capacity	8 Gallons
Hydraulic Fluid	Anti-abrasion ISO viscosity grade #46 Hydraulic Fluid. Change every 100 hours of use.
Rotation viewed from PTO (power takeoff - the output shaft)	Counterclockwise
Maximum Log Size	25" Long x 12" Diameter
Towing	For off-road use only (not DOT approved)
Coupler Ball Required	2"
Wheel Size	8-4.80/4.00
Tire Air Pressure	60 PSI (cold)
Supplied Accessories	Hitch Coupler, Safety Chain

**Note:** Engine specifications are found in the engine manual supplied with this equipment.

## UNPACKING

When unpacking, make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

## SET UP INSTRUCTIONS



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

## AWARNING TO PREVENT

FROM ACCIDENTAL STARTING:

Turn the Power Switch of the equipment to its "OFF" position, wait for the engine to cool, and disconnect the spark plug wire(s) before assembling or making any adjustments to the equipment.

## 

TO PREVENT SERIOUS INJURY:

Operate only with proper spark arrestor installed.

Operation of this equipment may create sparks that can start fires around dry vegetation.

A spark arrestor may be required.

The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

#### Assembly

# Packing the Bearings / Hub and Wheel Assembly.

- Whenever a hub is disassembled (if a hub on a new unit requires assembly or a hub is disassembled for maintenance), the following procedure MUST be followed.
- 2. Using a suitable solvent, clean the bearings and the rest of the parts of the Hub assembly. The parts must

be cleaned even if they are new or appear clean. Allow all pieces to dry completely.

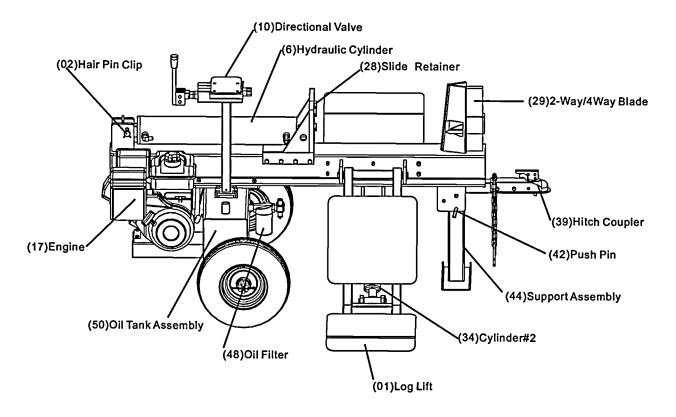
- 3. Place fresh, clean bearing grease in the packer (not included).
- 4. With the grease-filled bearing packer in one hand and the Bearing (52) in the other, press the Bearing into the grease, forcing the grease inside the slots in the bearing, continue doing this until every slot in the Bearing is completely full of grease.
- 5. Do not get any dirt or debris on any part of the assembly. Secure with Bearing Seal (51)
- With each Tire in place, add a Washer (55) and a Castle Nut (54) onto the ends of the Axles. Tighten the Castle Nuts to 20-25 ft. pounds, and rotate each tire several turns to seat

the bearing. Back off the Castle Nut one half turn. Insert a Cotter Pin (53) through both the Axle and the Castle Nut and bend the end of the Pin back to hold it in place.

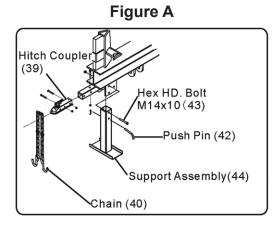
#### Log Splitter Assembly

**Please Note:** This item is extremely difficult to assemble without heavy equipment to lift and secure parts in place on the item. The base and main beam junction of the product require the alignment of holes with the four bolts and nuts used to secure the two pieces together during operation of the item. Do not assemble without assistance. If you do not feel entirely confident about your ability to assemble the Log Splitter correctly, contact a qualified service professional to assemble the Log Splitter.

Page 8

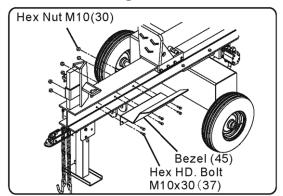


- Raise the Engine and Oil Tank Assembly about 9 inches onto a secure platform. Connect the Wheels to the axles using the supplied hardware (parts 53 - 55) as previously stated. (It may be necessary to reset the wheel bearings after the Log Splitter has been towed.)
- With the Engine and Oil Tank Assembly still raised, attach the Rail Assembly (19) using Hex Bolts (24) and Hex Nuts (32). Pay attention to the directional Arrows on the unit. They will aid in assembling the unit in the proper orientation.



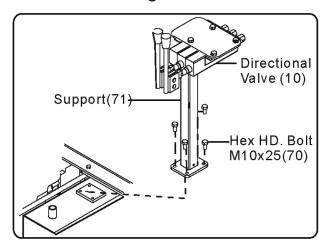
- 3. Use Hex Bolt (43) to install the support assembly See Figure A.
- 4. The Push Pin (42) is used for both standing and towing positions.
- Install the Hitch Coupler (39) onto the Rail Assembly (19), using the Hex Bolts (09, 35), a Washer (36), and Hex Nuts (38, 30).

Figure B

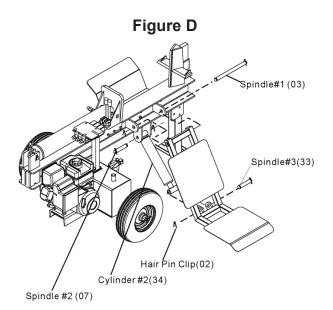


 Install Bezel (45), with 6 sets of Hex Nuts (30) and Hex Bolts (37) - See Figure B.

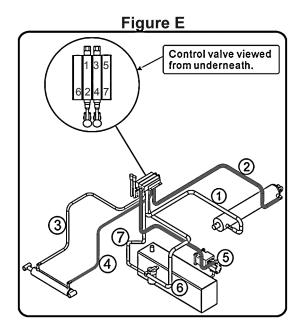
Figure C



 The control valve stand is attached onto the oil reservoir with 4 Hex Bolts (70) - See Figure C.



 The Spindles are used to assemble and connect the Log Lift (01) to the main unit - See Figure D.



 Connect the hoses as marked (Hose 1 to Connection 1, for example) the hoses will only reach the proper connections if attached in the proper orientation - See Figure E. Filling the Hydraulic Fluid

Figure F



Hydraulic Oil Cap (20)

- Remove the Hydraulic Oil Cap (20) and fill the tank with Hydraulic oil (not included) - See Figure F. Remove and retain the O-ring (21).
- 2. To check the hydraulic oil level, remove the Dipstick connected to the Hydraulic Oil Cap, wipe it clean, then dip it back in. Pull it out once again and check the oil level on the Dipstick.
- The oil should be at the upper notch of the Dipstick. Be sure that the hydraulic oil level is between 4.5 and 8 gallons. Replace O-ring and Hydraulic Oil Cap.
- 4. The hydraulic system must be vented during operation or it may become vacuum locked and stop working properly. To vent the system, open the air inlet hole by loosening the Hydraulic Oil Cap. You may have to move the O-ring to expose the air inlet vent.
- 5. When the Log Splitter is not in operation or being transported, close

the air inlet hole by tightening the Hydraulic Oil Cap.

### **OPERATING INSTRUCTIONS**



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.



Inspect engine and equipment looking for damaged, loose, and missing parts before set up and starting. If any problems are found, do not use equipment until fixed properly.

#### **Start Procedure**



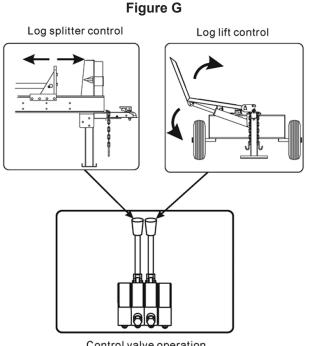
Before starting the engine:

- a. Follow the Set Up Instructions to prepare the equipment. Follow all instructions in the separate engine manual provided with the engine.
- b. Inspect the equipment and engine.
- c. Fill the engine with the proper amount and type of fuel and oil.
- d. Read the Equipment Operation section that follows.

#### **Equipment Operation**

**Note:** The Log Splitter can accommodate logs up to 25" long and with no more than a 12" diameter. The maximum diameter applies to most soft to medium types of woods. Maximum diameter of hardwoods may vary depending on density of the wood.

- 1. Chock the wheels before starting the engine or changing the position (vertical/horizontal) of the unit.
- 2. Choose the 4-way splitter or the regular splitter and secure the splitter in place with the Clevis Pin (74) and the R-Pin (41).
- Check oil, gas and hydraulic fluid levels, and fill as necessary. Start the engine, see manufacturer's manual for directions.
- 4. Place a log on the Log Lift (1). Push the RIGHT control lever forward to engage the Log Lift and move the log into cutting position. Do not place the logs directly on the Rail Assembly; it is more safe and efficient to use the Log Lift - See Figure G.
- 5. When the Log is in place on the Rail Assembly, pull the lever back and allow the Log Lift to return to the original position.



- Control valve operation
- 6. Push the LEFT control lever forward to engage the hydraulic ram and split the log. Continue to hold the lever forward until the log is split - See figure G.

TO PREVENT

**SERIOUS INJURY:** Keep hands and feet clear of the ram of the Log Splitter during this entire procedure, including when the ram is withdrawing to the original position.

## 

**TO PREVENT SERIOUS INJURY:** 

Keep spectators clear of the splitting area. When wood is being split, projectiles can fly in any direction.

7. After the log is split, move the lever back to withdraw the Ram.

- 8. Continue loading logs on the Log Lift, and splitting them until the job is done.
- 9. To prevent accidents, turn the engine off and disconnect its spark plug wire after use. Wait for the engine to cool, clean, then store the tool in a dry area out of children's reach.

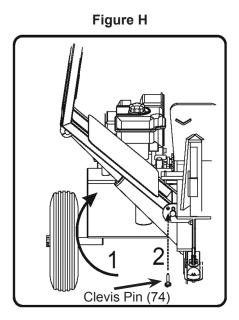
#### Transporting the Log Splitter:

- 1. Check the tire pressure. PSI should be at 60 for the Wheels before travelina.
- 2. Connect the Log Splitter to a 2" hitch ball (not included) on the vehicle. Use the chains to secure the Log Splitter to the towing vehicle. The hitch coupler must be properly secured to the hitch ball of the towing vehicle. After attachment, pull up on the hitch coupler to make sure that the hitch ball fits snugly on the hitch coupler. There can be no play between the hitch ball and the hitch coupler. Follow all safety warnings in the manufacturer vehicle's owners manual.

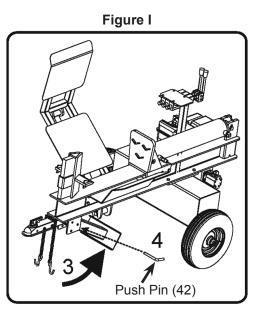
### 

**TO PREVENT SERIOUS INJURY:** 

If the coupler is not secured properly, the Log Splitter could come loose while the vehicle is in motion causing property damage, serious personal injury or death.



 Raise the Log Lift and insert the Clevis Pin (74) in the upper hole and secure with R-pin (41) - See Figure H.



- Move the front leg up and secure it at the second Pin hole. Insert the Push Pin (42) to lock in place - See Figure I.
- 5. Do not drive faster than 55 MPH when the Log Splitter is connected to the vehicle.

- Do not tow the Log Splitter on roads or highways. This product is not D.O.T. compliant, and is not road legal.
- Before transporting, and at 500 mile intervals during every trip, check and tighten the Tire Lug Nuts to 85 - 90 Ft.-Lbs.
- 8. Every 2,000 to 3,000 miles of travel, lubricate the Hub Assemblies with a heavy weight bearing grease. Follow the Packing the Bearings Instructions on page 7 of this manual. After each Hub Assembly is reassembled, tighten the Castle Nuts to 20-25 ft. pounds, and rotate each tire several turns to seat the bearing. Back off the Castle Nut one half turn.
- Insert a new Cotter Pin (53) through the Castle Nut and the hole in the axle. Bend the Pin back, locking it and the Nut in place.

### SERVICING

AWARNING TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL STARTING: Turn the Power Switch of the equipment to its "OFF" position, wait for the engine to cool, and disconnect the spark plug wire(s) before performing any inspection, maintenance, or cleaning procedures.

AWARNING TO PREVENT SERIOUS INJURY

FROM EQUIPMENT FAILURE: Do not use damaged equipment. If abnormal noise, vibration, or excess smoking occurs, have the problem corrected before further use.

#### Maintenance Procedures

Many maintenance procedures, including those not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment or engine, have a qualified technician service the equipment instead.

- **Note:** These procedures are <u>in addition to</u> the regular checks and maintenance explained as part of the regular operation of the engine and equipment.
- 1. **BEFORE EACH USE,** inspect the general condition of the tool. Check for loose screws, misalignment or binding of moving parts, cracked or

broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.

- 2. **AFTER USE,** clean external surfaces of the tool with clean, moist cloth. After every use, wipe down the Log Splitter to remove any tree sap or dirt. This will extend the life of the unit. Always keep the wedge and base clean.
- 3. Clean and then grease the moving parts of this machine after each use.
- 4. Periodically, grease the moveable joints to minimize wear.
- 5. Periodically, use a file to sharpen the edges of the Blades.

#### Bleeding the Hydraulic System:

- If the Log Splitter begins to lose power or splitting efficiency, it may be a result of air becoming trapped in the hydraulic system. To bleed the hydraulic system:
- 2. Fill the oil reservoir.
- 3. Back off the Filler Cap, so the air may vent out.
- 4. Start the engine to cycle the cylinder. Advance and Retract the Ram several times to push the air out of the cylinder into the reservoir.
- 5. Add more hydraulic oil to the reservoir as needed.
- Test the Log Splitter to make sure it is operating properly. If not, repeat the above process.

#### Changing the Hydraulic Fluid

- 1. Place a container underneath the hydraulic fluid tank to catch the fluid, and unscrew the cap on the bottom of the tank.
- 2. Unscrew the Hydraulic Oil Cap to speed up the draining process.
- Dispose of used hydraulic fluid in a manner consistent with State, local, and Federal laws and regulations.
- 4. Refill with fresh Hydraulic fluid.
- 5. The system must be purged of air after filling the fluid.

#### **Engine Maintenance and Service**

Follow the instructions found in the included engine manual.

#### **Equipment Lubrication**

- 1. Gear Box is shipped properly filled with grease.
- 2. Yearly, open the Gear Box and check the grease level.
- Add grease only up to top of gears.
  Do not overfill grease; overfilling will damage the equipment.

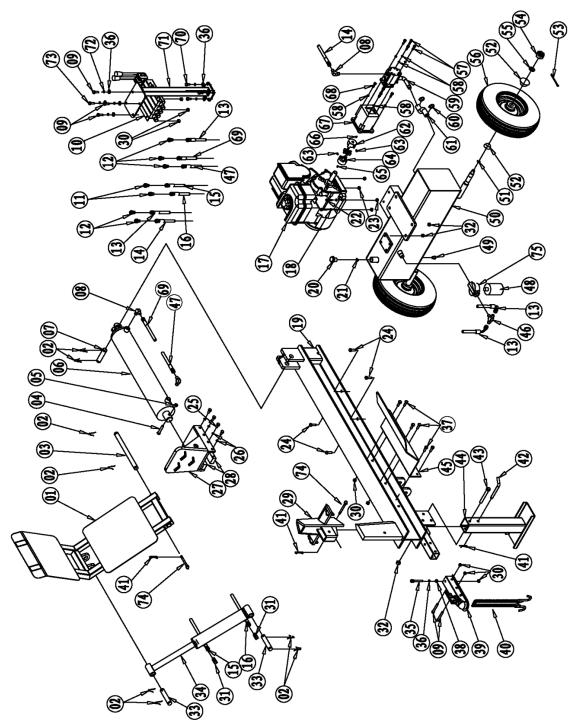
#### Storage

- 1. Wait for engine to cool, then clean equipment with compressed air and/ or a clean cloth.
- 2. Clean the engine and/or prepare it for storage according to engine manual instructions.
- 3. Apply a thin coat of rust preventive oil to all uncoated metal parts.

- 4. Cover and store in a dry, well-ventilated area out of reach of children.
- 5. For cold weather operation, store the equipment in a cool dry area to prevent condensation and premature wear.

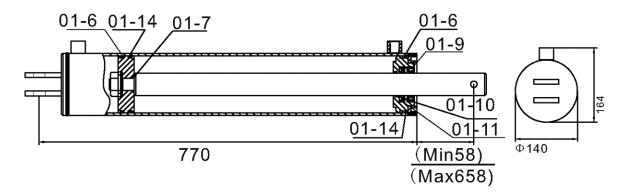
PARTS LIST					
Part	Description	Qty	Part	Description	Qty
1	Log Lift	1	39	Hitch Coupler	1
2	Hair Pin Clip	8	40	Chain	1
3	Spindle #1 M32	1	41	R-pin	3
4	Hex Bolt M12x70	1	42	Push Pin	1
5	Nut M12	1	43	Hex Bolt M14x10	1
6	Hydraulic Cylinder	1	44	Support Assembly	1
7	Spindle #2 M10.6	1	45	Bezel	1
8	Fitting #1	3	46	Fitting #3	1
9	Hex Bolt M10x70	5	47	High Pressure Hose #1 19.6"	1
10	Directional Valve	1	48	Oil Filter	1
11	Connector	2	49	Hex Bolt R3/4-19	1
12	Connector	5	50	Oil Tank Assembly	1
13	Return Hose 27.5"	2	51	Bearing Seal	2
14	High Pressure Hose 47"	1	52	Bearing	4
15	High Pressure Hose #3 61"	1	53	Cotter Pin	2
16	High Pressure Hose #4 51"	1	54	Castle Nut M18	2
17	Engine	1	55	Washer Φ 18	2
18	Washer Φ 8	4	56	Tire	2
19	Rail Assembly	1	57	Hex Bolt M8x20	4
20	Hydraulic Oil Cap	1	58	Spring Washer	8
21	O-ring	1	59	Hydraulic Pump	1
22	Hex Bolt M8x45	4	60	Hose Clamp	2
23	Hex Nut M8	4	61	Return Hose (low pressure) 6"	1
24	Hex Bolt M14x40	4	62	Coupling Pump Side	1
25	Hex Bolt M12x35	8	63	Hex Screw M8x12	2
26	Spring Washer Φ 12	8	64	Coupling Pump Side	1
27	Push Block	1	65	Engine Key	1
28	Slide Retainer	2	66	Pump Key	1
29	Blade Assembly (2 way & 4 way)	1	67	Pump Mounting Bracket	1
30	Hex Nut M14	12	68	Hex Bolt 5/16"-24x1 L	4
31	Hydraulic Fitting 3/8"	2	69	High Pressure Hose #2 (23.6)	1
32	Hex Nut M14	5	70	Hex Bolt M10x25	4
33	Spindle #3 M12	2	71	Support	1
34	Cylinder #2	1	72	Spring Washer Φ 10	8
35	Hex Bolt M10x90	1	73	Hex Bolt M10x20	1
36	Washer Φ 10	9	74	Clevis Pin	2
37	Hex Bolt M10x30	6	75	Oil Filter Lid	1
38	Hex Nut M12	1	L		

### **ASSEMBLY DIAGRAM**

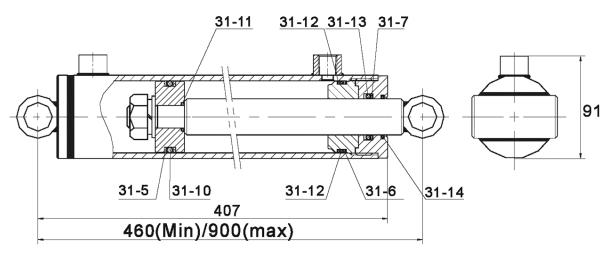


Part	Description	Qty		
01-6	O-ring Seal 118*5.3	4		
01-7	O-ring Seal 38.5*3.55	1		
01-9	J Type Rubber Seal 50*70*10	1		
01-10	Y Type Seal 50*70*10	1		
01-11	O-ring Seal 50*3.55	1		
01-14	Nylon Washer 127*118*2	3		

### Hydraulic Ram Seals Parts List & Diagram



Part	Description	Qty
31-5	Nylon Cap 63 54.2 2	2
31-6	Nylon Cap 63 58.5 1.5	1
31-7	Nylon Cap 41 32 2	1
31-10	O-ring 53 5.3	1
31-11	O-ring 19 3.55	1
31-12	O-ring 56 3.55	2
31-13	O-ring 31.5 5.3	1
31-14	Dust Cap 32 5	1



#### PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

#### Record Product's Serial Number Here:

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

### LIMITED 1 YEAR / 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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